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ABSTRACT OF THE DISCLOSURE

Tyre for vehicle wheels having a carcass structure shaped in a substantially toroidal configuration, the opposite lateral edges of which are associated with respective right-hand and left-hand bead wires to form respective beads; a belt structure applied in a radially external position with respect to the carcass structure; a tread band radially superimposed on the belt structure; at least one layer of crosslinked elastomeric material applied in a radially internal position with respect to the tread band; a pair of sidewalls applied laterally on opposite sides with respect to the carcass structure, wherein the at least one layer of crosslinked elastomeric material has a dynamic elastic modulus, measured at 70°C, not lower than 20 MPa, preferably 25 MPa to 50 MPa; a ratio between tensile modulus at 100% elongation and tensile modulus at 10% elongation not lower than 1.5, preferably 2 to 5. Preferably the at least one layer of crosslinked elastomeric material is placed between the tread band and the belt structure.